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TITLE: HIGH STRENGTH CONCRETE

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INVENTOR-INFORMATION:

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ABSTRACT:

PROBLEM TO BE SOLVED: To obtain high strength concrete having small coefficient of brittleness by incorporating cement, a high performance water reducer or a high performance AE water reducer, a fine aggregate, a coarse aggregate, a shrinkage-reducing agent and/or an expansive admixture and specifying the ratio of water to the cement.

SOLUTION: The high strength concrete having compressive strength of  $\geq 60$  N/mm<sup>2</sup> is produced by incorporating cement (various kinds of portland cement, various kinds of mixed cement or the like), a high performance water reducer or high performance AE water reducer (lignin-matter, melanin-matter or the like), a fine aggregate (river sand, land sand or the like), a coarse aggregate (river gravel, mountain gravel or the like), a shrinkage-reducing agent and/or an expansive admixture and controlling the ratio of water to the cement

to be not more than 40 wt.%. The ratio of the high performance water reducer or the high performance AE water reducer to the cement is about 0.5 to 3.0 wt.%, and the content of the fine aggregate is about 46 to 55 wt.%. The ratio of the shrinkage-reducing agent to the cement is about 0.5 to 2.0 wt.%, and the ratio of the expansive admixture to the cement is about 1 to 10 wt.%. The unit cement content is preferably about 500 to 700 kg/m<sup>3</sup>.

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